

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte DUANE F. CARD,  
EBERHARD S. DITTMAN  
and  
MUKUND K. SARAIYA

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Appeal No. 97-2488  
Application 08/163,202<sup>1</sup>

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ON BRIEF

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Before COHEN, McQUADE and BARRETT, Administrative Patent Judges.

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<sup>1</sup> Application for patent filed December 6, 1993. According to appellants, the application is a division of Application 07/976,632, filed November 16, 1992, now U.S. Patent 5,295,214, issued March 15, 1994.

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COHEN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 22 and 37 through 42. Based upon the application file record of pending and canceled claims, these claims constitute all of the claims remaining in the application.<sup>2</sup>

Appellants' invention pertains to a process for manufacturing an electrical interconnect structure and to a process for manufacturing an electrical assembly. An understanding

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<sup>2</sup> We are aware of the circumstances surrounding claim 30, a claim canceled pursuant to appellants' directive to do so (page 5 of Paper No. 7). We note that appellants' directive for cancellation encompassed claims 23 through 29, which cancellation is not disputed by appellants. Thus, claim 30 is not pending, nor finally rejected, as indicated on page 1 of the amended appeal brief (Paper No. 22). The cover sheet of the final rejection (Paper No. 8) indicates that claim 30 was canceled, and no rejection of claim 30 appears in the body of the final rejection. The Notice of Appeal (Paper No. 9) does not refer to claim 30. While appellants view the cancellation of claim 30 as an obvious typographical error (reply brief, page 2), this matter nevertheless is one that can only appropriately be resolved during any further prosecution before the examiner.

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of the invention can be derived from a reading of exemplary claims 22 and 42, as they appear in the application file (Paper No. 7).<sup>3</sup>

The following rejection is the sole rejection before us for review.

Claims 22 and 37 through 42 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

The full text of the examiner's rejection and response to the argument presented by appellants appears in the final rejection and answer (Paper Nos. 8 and 23), while the complete statement of appellants' argument can be found in the amended main and reply briefs (Paper Nos. 22 and 24).

In the amended main brief (page 3), appellants indicate that the claims do not stand or fall together, and list

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<sup>3</sup> We refer to the application file for these claims since the appendix to the brief does not include correct copies thereof. For example, in claim 22 of the appendix, line 21, --of dielectric material-- has been omitted after "layer."

claims 22 and 37 through 41 as Group I<sup>4</sup> and claim 42 as Group II. Based upon the aforementioned claim groupings and the argument presented, it is apparent that claims 22 and 37 through 41 stand or fall together and that claim 42 stands alone. As to the Group I claims, we select claim 22 for review, pursuant to 37 CFR § 1.192(c)(7). Accordingly, we focus our attention exclusively upon claims 22 and 42, *infra*.

#### OPINION

In reaching our conclusion on the indefiniteness issue raised in this appeal, this panel of the board has carefully considered appellants' specification, drawings, and claims 22 and 42, and the respective viewpoints of appellants and the examiner. As a consequence of our review, we make the determination which follows.

We affirm the examiner's rejection of appellants' claims under 35 U.S.C. § 112, second paragraph, as being indefinite.

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<sup>4</sup> Claim 30, included by appellants, has not been specified herein for the reasons appearing in Footnote No. 2.

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In discussing the requirements of 35 U.S.C. § 112, second paragraph, the court in In re Hammack, 427 F.2d 1378, 1382, 166 USPQ 204, 208 (CCPA 1970) stated that

[i]ts purpose is to provide those who would endeavor, in future enterprise, to approach the area circumscribed by the claims of a patent, with the adequate notice demanded by due process of law, so that they may more readily and accurately determine the boundaries of protection involved and evaluate the possibility of infringement and dominance.

The view has further been expressed that claims are considered to be definite, as required by the second paragraph of 35 U.S.C.

§ 112, when they define the metes and bounds of a claimed invention with a reasonable degree of precision and particularity. See In re Venezia, 530 F.2d 956, 958, 189 USPQ 149, 151 (CCPA 1976). It must also be kept in mind that claim language is read in light of the specification, as it would be interpreted by one of ordinary skill in the art. See In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983).

Taking the above principles into consideration, we turn now to the situation of the present application.

Having read the underlying specification of appellants' application, and reviewed independent claims 22 and 42 in light thereof, we fully appreciate the difficulty encountered by the examiner in seeking an understanding of the content of the claims as drafted.

The examiner has faulted the claims in the rejection as being vague, indefinite, and awkwardly and/or confusingly worded. We find that the organization of the content of each of process claims 22 and 42 is awkward, rendering the readability thereof

quite difficult. This problem is exacerbated by the circumstance that the underlying specification is not structured to include a specific portion thereof devoted to the disclosure of the processes now claimed, upon which the claims at issue can be read in light thereof.<sup>5</sup>

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<sup>5</sup> We note that the process for manufacturing an electrical interconnect structure of claim 22 includes the recitation of providing windows "for mass soldering of the leads to the lands" (at line 26), an apparent non-limiting intended use, whereas in claim 42, the process for manufacturing an electrical assembly not only includes the step of providing windows "for soldering the leads to the lands" (lines 27 and 28) but also expressly includes as a limitation thereof the step of "soldering" the

As to the concerns of the examiner relative to claim 22, we find that the step of selectively coating "for providing . . ." (lines 3 through 16) gives the impression that this step of coating is intended to provide the specifically recited conductive paths, passages, conductive lands, and soldering bridges listed within this method step. On the other hand, the etching step is recited as removing areas of conductive film "in order to provide said conductive paths, conductive lands and soldering bridges and passages through the conductive film." The latter etching step thus appears to clarify that the coating step

is for providing the material (layer of conductive film) acted upon by etching in order to provide the conductive paths, passages, conductive lands, and soldering bridges. This understanding comports with appellants' view of the matter (amended main brief, page 6). A similar situation is presented in process claim 42 wherein respective coating steps for providing conductive paths, conductive lands, and soldering bridges projecting into passages, precedes the etching step removing

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leads to the lands (lines 31 through 33).

areas of the conductive film in order to provide the conductive paths, conductive lands and soldering bridge means and to provide passages through the conductive film. We, accordingly, understand this aspect of claim 42 for the same reason addressed in our analysis of the comparable language in claim 22, supra. Thus, as to the aforementioned matters pertaining to steps of coating and etching, it appears to us that the language of claims 22 and 42 can be fairly comprehended.

A problem area of indefiniteness which persists in claims 22 and 42, however, relates to the recitation of the soldering bridges "for producing desired solder joint configurations between the lands and leads" (claim 22, lines 15 and 16) and "for producing a desired solder joint configuration between the lands and leads" (claim 42, lines 13 and 14). In subsequent portions of these claims, the respective steps of providing a first layer "for providing said desired solder joint configurations" (claim 22, lines 23 and 24) and providing blanket coverings "for producing said desired solder joint configurations" (claim 42, lines 24 and 25) appear. The specified content of these latter steps clearly contradicts the



former portions of respective claims 22 and 42 mentioned above. Thus, these claims are ambiguous in meaning in this matter, which ambiguity renders the claimed subject matter indefinite. No other language in respective claims 22 and 42 overcomes the aforementioned ambiguity.

In claim 22, lines 8, 18 through 20, and lines 25, 26, "passages," said "passages," and "the passages" are set forth. However, the reference to "passages" (line 9) is not understood since it is uncertain if the previously recited passages (line 8) or different passages are intended. Similarly, from the language of line 18 of claim 42, it is uncertain as to whether the same (passages of lines 9, 13, and 26) or different passages are intended. Additionally, we are uncertain in reading claim 42 as to what difference in meanings exists for the term of degree

"adjacent" (line 9) and the term of degree "proximate" (line 19), each with regard to the relative positioning of the passages and conductive lands.

It is clear to this panel of the board that the presence of the noted indefinite language obfuscates the metes and bounds of the claimed method which appellants regard as their invention.<sup>6</sup> As a concluding point, we note that the examiner indicates that the presence of indefiniteness in the claims, i.e., the inability to ascertain the metes and bounds of the claimed subject matter, is the reason why prior art has not been applied thereto (answer, page 5).

In summary, this panel of the board has affirmed the rejection of claims 22 and 37 through 42 under 35 U.S.C. § 112, second paragraph, as being indefinite.

The decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

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<sup>6</sup> In the amended appeal brief (page 7), it is set forth that the invention lies "in the details of the process i.e. that the coating is patterned so as to produce solder bridges that extend from the lands into the apertures."

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AFFIRMED

IRWIN CHARLES COHEN )  
Administrative Patent Judge )  
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JOHN P. McQUADE )  
Administrative Patent Judge )  
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LEE E. BARRETT )  
Administrative Patent Judge )

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